

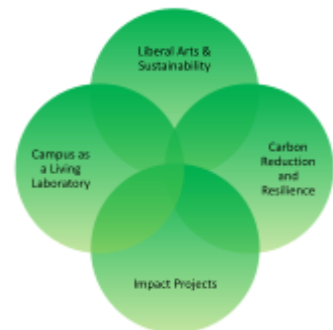


Council on Sustainability and Social Responsibility 2019-21 Annual Survey of Campus Activity

Overview and Strategic Aims

Over the past two COVID-affected years the Council on Sustainability and Social Responsibility (CSSR) has continued to focus its efforts on the implementation of the Sustainability Strategic Plan, available at <https://www.haverford.edu/sustainability>. The Plan is centered on four overlapping areas of activity:

1. **Liberal Arts and Sustainability:** we will educate our students to be future citizens and leaders who will advance a broad array of sustainability objectives through their personal and professional lives.
2. **Campus as a Living Laboratory:** we will utilize Haverford's distinctive natural and physical assets to connect curricular and co-curricular programs with local issues of sustainability and to model innovative solutions for broader audiences.
3. **Carbon Reduction and Resilience:** we will accelerate Haverford's commitment to carbon neutrality and begin developing a physical infrastructure that can perpetuate our educational mission in a world significantly less reliant on fossil fuels.
4. **Impact Projects:** we will provide avenues for the College and our students to engage directly with urgent and consequential sustainability challenges through civic engagement, advocacy, and career and professional opportunities.



2019-21 Highlights

Due to interruptions to regular campus rhythms due to the COVID-19 pandemic, the fourth and fifth years of the Plan's implementation are both covered in this report. There has been much campus activity; with apologies for omissions, the following is a list of notable and/or illustrative happenings:

Liberal Arts and Sustainability:

- **Engagement across the disciplines:**
 - **Fall 2019 TriCo Philly**
 - The TriCo Philly program allows students to have a unique interdisciplinary learning experience in the city of Philadelphia. Students have the opportunity to learn about the city first-hand, instead of from the distance of the Main Line. In Fall 2019, the TriCo Philly program put a specific emphasis on Environmental Justice & Sustainability.
 - The program offered four environmentally-related courses to students: *Urban Education and Environmental Justice*, *Math Modeling and Sustainability*, *Environmental Justice: Theory and Action*, and *Place, People and Collaborative Research in Philadelphia*
 - As part of the program, students participated in a *Designing a NEW Green New Deal* exercise, met with leaders in the environmental justice field (such as Susan Jin Davis, Chief Sustainability Officer at Comcast), and aided local advocacy



groups like The Philly Climate Dads, partnering to examine the practicality of electric school buses for the Philadelphia public school district.

- Outside of the classroom, many students attended Friday School Strikes for Climate Change, and also worked with Philly Thrive, a community-based organization advocating to close a Philadelphia refinery due to harmful effects on the neighboring largely-BIPOC communities.
- The TriCo Philly program is hosted in the Friends Center, a LEED Platinum Certified building.
- Calista Cleary, who runs the TriCo Philly Program, believes Fall 2019 was one of the most successful semesters for the program and feels the program can take inspiration from it, saying "I feel most [TriCo Philly] classes could connect to environmentalism, if the professors wanted to take it that way."

- **2020 Public Policy Forum**

- Haverford's [Public Policy Forum](#), which directly connects students to professionals working in public policy, was set to have a panel focusing exclusively on the environment. However, the Forum was canceled because the COVID-19 outbreak started three weeks before the scheduled event.

- **Environmental Studies:**

- Student interest in the **BiCo ENVS department** continues to grow. The department has had more majors every year for the last five years, signaling that students are increasingly concerned about and engaged with our climate crisis.
- Enrollment statistics for Haverford students only. Enrollment numbers for Bryn Mawr are expected to be similar.
 - **Class of 2019:** Majors - 2, Minors - 17 (graduated)
 - **Class of 2020:** Majors - 5, Minors - 10 (graduated)
 - **Class of 2021:** Majors - 11, Minors - 13 (graduated)
 - **Class of 2022:** Majors - 13, Minors - 16 (current seniors)
 - **Class of 2023:** Majors - 15, Minors - 10 (current juniors)

- **Campus discourse:**

- The Arboretum team remains deeply connected with our on-campus community and neighbors/campus visitors.
 - In the 2019 - 2020 academic year, the Haverford Arboretum offered twenty volunteer workdays, during which 141 total volunteers contributed over 800 collective hours.
 - In the 2020 - 2021 academic year, visitors were not allowed on campus because of COVID-19, but the Arboretum still engaged with our community through twenty virtual programs and events.
- Active Arboretum programs included the monthly Nature Book Club, Joan Maloof for Annual Hardy Plant Society Lecture, the annual Tree Canopy Conference, and Earth Week.
 - The Nature Book Club was held monthly on a virtual basis throughout COVID with a brief break in Summer of 2020.
 - The Tree Canopy Conference was held in Stokes in 2019, and hosted virtually in 2020.
 - Our annual Plant Society lecture series continued throughout this period. In October 2019, Scott Wade spoke about state champion trees. In October 2020, Eva Mondheim spoke about shrubs with winter interests.



- Haverford and Bryn Mawr continued to have a robust calendar of Earth Week programs. In 2020, COVID-19 forced Earth Week into being a limited affair, but students remained actively involved in the programs. Students led virtual sustainability tours of campus, among other virtual activities. In 2021, Earth Week returned, with the annual tree planting, and a partnership with the Phebe Anna Thorne school to bring in other audiences.

Campus as a Living Laboratory

- **Energy:**
 - Even with the obstacle of the pandemic, the Committee on Environmental Responsibility continued to hold its annual **Do it in the Dark** energy conservation challenge.
 - The 2020 challenge lasted from February 15th to March 6th. On March 6th, students were sent home because of COVID-19, effectively ending that edition early. In 2020, the winning dormitory was Gummere Hall with a 24.2% reduction in energy, and across campus there was an average 5.7% energy reduction.
 - The 2021 challenge resumed the normal schedule, running from March 8th to March 29th. The winning dormitory was Kim Hall, which reduced energy usage by 27.2%. The average reduction was 16.6%, which was the highest rate in the last three years.
- **Transportation:**
 - In Fall 2019, CER and the Arboretum hosted the Devereux Foundation for a sale of reused bikes. Also, in Fall 2019, the same groups also held a bike workshop, which taught students how to fix and tune their bikes. There was not a reused bike sale nor a bike workshop in 2020 due to health-oriented rules about visitors on campus. CER has suspended its partnership with Devereux due to external controversy, and the program's future is uncertain.
 - In 2021, ten level two electric vehicle charging stations were installed on campus in four separate locations (South Lot, Lloyd Lot, 10 Railroad, and near the Duck Pond), replacing the four aging level one charging stations in the South Lot. These stations were partially funded through a generous rebate from the Pennsylvania Department of Environmental Protection, connected to the national settlement from Volkswagen's Environmental Mitigation Trust.
- **Food Loop:**
 - The College exceeded its **Real Food Challenge** goal by devoting 24% of the campus food spend to sustainable, humane, fair trade, and local foods.
 - The Dining Center achieved Level 2 Certification by the **Green Restaurants Association**.
 - The new **Haverford Food Co-op**, supported by CER and the DC, helped students source regional food in bulk.
 - The school purchased **OZZI** reusable container machines to offer a more sustainable option for take-out, and piloted the program in Fall 2019. The program was interrupted due to COVID-19, but will return in Fall 2021.
 - **Haverford College Farm** Fellow Madison Tillman provided significant professional support and instructed student farming initiatives. She led the PE course at the HaverFarm, hosted numerous campus and community visitors, and supported Saint Mary's food bank with produce.
 - Do it in the Dark included a corollary **Meatless Challenge**.



- After problems finding a reliable compost hauler, and deterring pests from the compost tubs, the Dining Center and President's Office partnered on the installation of an aerobic digester, which grinds up food waste with the help of microorganisms, and sends the organic material into the wastewater system. The unit was installed in August 2019, and after a community naming contest, was dubbed "Munchy Crunchy, Grinds Up Your Lunchy". In year 1 (August 2019-June 2020), Munchy Crunchy disposed of 52,000 pounds of food waste, and in year 2 (July 2020-June 2021), the total was 46,000 pounds of food waste.
 - The digester began with only pre-consumer food waste from the back of the Dining Center, and grew to include pre-consumer food waste from the COOP as well. A few months later, the DC changed their processes to include post-consumer food waste as well, by having staff separate appropriate food scraps as a part of the dish return process. This has not always remained possible, due to the challenges of the COVID-19 pandemic, as well as staffing shortages, but remains a priority goal.
- **Waste:**
 - In Fall 2019, Dining Services eliminated **single-use plastic straws and dishes** from its operations.
 - To appropriately respond to health concerns during the COVID-19 pandemic, the Dining Center used biodegradable plates, bowls, and containers, along with single-use plastic cutlery.
 - In 2019-2020, the Marilou Allen Office of Community Service and Collaboration partnered with Harwood House to **divert food waste** after meals. The new program required two volunteers to collect unused food from the Dining Center and deliver it to Harwood House twice a week.
 - Harwood House in nearby Upper Darby is a local rehabilitation shelter for men who struggle with substance abuse. Our partnership with Harwood House ended at the beginning of the COVID-19 pandemic because of health concerns about food and germs. Many food pantries now require individual packaging and have additional regulations.
 - Haverford continued to promote local food drives started by the Ardmore Food Pantry and Philabundance in an effort to address food insecurity in the community.
 - CSSR typically provided **electronics recycling** to community members during Earth Week to properly dispose of complex items, like televisions, microwaves, and other electronic items. While this was not able to happen in 2020 or 2021, CSSR intends to work with [PAR Recycle Works](#) on electronics recycling in future years.
 - CSSR organized another **office supply swap** in August 2019, in advance of the beginning of the school year.
 - CSSR continued its **Haverford Reuses** move-out collection program at the end of the school year, diverting numerous tons of items from the landfill. The [\(RE\)use Store](#), or "free store", collects, cleans, and organizes a range of items commonly used by students, and makes the items available to new and returning students over the course of the year. Items not able to be kept in the (RE)use Store, such as linens, large furniture, and clothing, are donated to the local organization Green Drop, benefitting local charities. The (RE)use Store, which officially opened in the 2020-21 year, is housed in the basement of Comfort. Jennie Ciborowski, the staff member who directly supervises the



space, says "Hopefully, we can recycle more on campus and not have things go to a landfill." In the 2020-21 school year, there were 192 visitors, who checked out a total of 773 items. The program, which began with a focus on mini-fridges (and avoiding the accidental or unnecessary release of refrigerant), has become a burgeoning circular program, and has helped to decrease the number of items that new students, or students living in a new housing environment (such as the Haverford College Apartments), need to buy in order to be comfortable and well set-up.

- Incoming students (courtesy of Dining Services) and new employees (courtesy of CSSR) received a **free reusable water bottle**.
 - The President's Office continued its reuse program for **commencement regalia**.
 - The collection has continued for multiple years, and currently includes about 150 gowns for FLI graduates to borrow.
 - The President's Office (in partnership with campus offices) organized the donation of surplus items to local charities.
 - Furniture at the College is refreshed on a regular cycle to ensure consistent quality and condition. In 2020, this cycle included a host of residence hall furniture that was still usable, but no longer in peak condition. Twenty two-drawer cabinets, ten bookshelves, and fifteen desks were donated to the Elwyn Foundation, and ten bookshelves, eleven side tables, seven dressers, a wardrobe, three twin mattresses, two desks, and sixty-six twin bed frames were donated to the Philadelphia Furniture Bank.
 - Additionally, we continued our partnership with Project Home, donating 1,200 books to their programs which were no longer needed at the bookstore (due in part to the transition to Barnes & Noble management).
 - All mattresses replaced as a part of the regular refreshment cycle that were not in a condition to be donated to local partners were recycled through Richard S. Burns and Company, a specialty recycler in Philadelphia.
- **Campus Ecosystems:**
 - The Arboretum continued its comprehensive **revitalization** project to remove failing trees and replant them 2-to-1. The aim is to increase the tree canopy by 10% in the coming years.
 - Facilities converted Barclay Beach to a meadow from high grass, reducing the need for mowing from three times to once per week. This change will prove better for stormwater run-off, minimize carbon emissions, and serve as an area for wildlife preservation.
 - CSSR completed a review of **grounds practices** to minimize chemical interventions and promote native habitats. To achieve desirable competition conditions, there is still significant herbicide use on athletic fields.
 - On food-producing parts of campus (the Haverfarm and Apartment gardens) the pesticide of choice is neem oil, a naturally produced extract.
 - Campus **beehives** continued to produce HaverHoney (and extraction workshops are provided in collaboration with beekeeper Eli St. Amour and Friends School Haverford) although extraction has been minimized so that the bees can be self-sustaining.
 - Haverford was recognized by Arbor Day Foundation as a **Tree Campus USA** for 2019 and 2020.



- Student plenary resolution requested remediation of **light pollution** on campus; Facilities will begin that process with an assessment tentatively scheduled for the 2022-23 academic year.
- **Policy and Administration:**
 - The College continued to implement our [Sustainable Purchasing Policy](#) developed by CSSR in partnership with the Purchasing Office. Some examples of changes made through this policy include converting tank-fed water stations into filtered water stations and buying alternative (sugarcane waste) and recycled-content paper.
 - Student Government
 - Student plenary resolution committed to incorporating sustainability criteria into **Students' Council spending**.
 - There were four resolutions about sustainability that were passed in the Spring 2020 Plenary:
 - Respect for Living Spaces: improving move-out
 - Capital with a Purpose: conscientious endowment allocations
 - Climate Justice at the Center of Strategic Planning
 - A new [draft](#) Strategic Plan framework includes environmental justice.
 - Resolution to reduce Light Pollution
 - Facilities is planning a lighting survey of the campus, but it was delayed due to the operating constraints of the pandemic.

Carbon Reduction and Resilience:

- **Energy:**
 - In 2020, Facilities completed the fifth year of a 5-year initiative to upgrade **Building Automation Systems** (BAS) in buildings across campus, enabling finer and more efficient control of heating, ventilating, and air-conditioning systems (HVAC).
 - Phase 5 Summary: We now have more sophisticated control of HVAC across campus. We received two rebate checks from PECO Energy Company totaling \$105,000; according to our return-on-investment (ROI) calculations, the project will cover its own costs in about 3 years. In terms of energy, we will save two thousand metric equivalent tons of carbons per year thanks to these BAS upgrades.
 - The College adopted a new **Utilities & Carbon Master Plan**, in service of the goal to reach carbon neutrality by 2033. This plan includes further investment in high-ROI efficiency measures in buildings to reduce energy demand, and increased use of campus-based and/or off-site renewable energy
 - We have been in talks with renewable energy developers and neighboring institutions, but have not yet found a successful pathway towards buying into a renewable energy agreement. A group of other PA schools announced a deal, but the energy production site was not local. Haverford is committed to having a local partnership as a part of such an energy agreement.
 - Facilities added a 3000 kWh solar panel for educational purposes at the Haverfarm. However, finding a large-scale on-campus renewable energy site is impossible. Facilities Director Bill Anderko says “we would have to



- destroy the Pinetum” if we wanted to fuel Haverford through solar power.
- Virtual power purchasing agreements are another possibility for Haverford to participate in alternative energy markets, but we would not be using the alternative energy generated under the agreement, as it would be taking place somewhere far from Pennsylvania.
 - Also, Haverford doesn’t have a lot of sway in these purchasing agreements, because of the low quantity of electricity we use (as a small institution). According to Facilities, the larger corporations and colleges will be “driving the bus”.
 - Energy Capital Investment Planning
 - We have mapped out many possible pathways towards reaching our carbon neutrality goal, including a number of projects. **The biggest step towards becoming carbon neutral is to** transition from steam-based to hot-water-based distribution on campus.
 - The biggest limitation for this project is capital funding, and the College needs to determine how to reach the goal. As of the end of the 2020-21 school year, this is a question for the Property and Finance Committees of the Board of Managers.
 - Another project includes shifting away from natural gas as the campus’s primary fuel. To become carbon neutral, biofuel, electricity, and/or another more sustainable fuel source would be necessary.
 - It is most likely that Haverford’s fuel source will be switched to biofuel, which is already in use at similar colleges including Bates and Middlebury. However, for those colleges, the biofuel is produced nearby (in Eastern Canada). For us in Pennsylvania, it becomes much more financially viable for us if a biofuel plant is built nearby.
 - **The Jaharis Recital Hall** and renovations for Roberts Hall were completed in the Spring of 2021. LEED environmental standards were used as a model for the construction of the building, but it was not formally submitted for LEED certification.
 - Construction waste was minimized via formal tracking/reporting, and recycling was pursued as appropriate to minimize landfill waste.
 - About one half of project square footage used existing building structures which were re-purposed, renewed, and reused, rather than the more carbon extensive process of demolition and new construction.
 - The roof of the new construction portion is a light colored TPO membrane, helping to minimize energy required to cool the building. Lighting throughout the project is LED.
 - Wood from campus trees that needed to be taken down as part of regular maintenance was used for stair treads, tables, and counters. All campus wood was processed by local craftsmen.
 - An efficient VFR (variable refrigerant flow) fan coil system heats & cools the re-purposed square footage. VFR systems, when properly designed, are generally about 20% more efficient than typical packaged air handling unit systems.
 - A water drainage system handles site stormwater primarily by recharging the water table, and therefore minimizes flow to underground stormwater infrastructure and downstream treatment plants.



- Between March 2020 and August 2020, fluorescent bulbs in the KINSC and in the Campus Center were replaced by LEDs. The College obtained four thousand free LED bulbs, each bulb saving eight watts.

Water:

- The College undertook a new **stormwater master plan**, completed in Fall 2019. As part of this plan, there are more efficient uses of stormwater for the Jaharis Recital Hall and for Stokes. A runoff pond will be added to the Pinetum. This master plan furthers the everyday projects designed **to limit water waste**. These projects included **preventing runoff from flooding onto Haverford Road** and **dredging the Duck Pond**.
- Since the fall of 2019, Facilities Management has installed 24 additional **water bottle filling stations**, bringing the campus' total to 46. Therefore, the number of stations has more than doubled in the last two years.

Impact Projects:

- **Public Advocacy:**
 - Haverford was part of a successful lobbying effort to get the US government to ratify the Kigali Amendment to ramp down use of hydrofluorocarbons.
 - Haverford has advocated for Pennsylvania to join the Regional Greenhouse Gas Initiative (RGGI) which would create economic incentives to decarbonize power generation in order to reduce GHG emissions statewide.
 - After advocacy from Haverford and other Lower Merion stakeholders, Lower Merion Township adopted a Carbon-Free Energy resolution.
 - Haverford advocated for sustainable development on two West Lancaster Avenue properties: 355 and 396. In the case of the latter, Chase Bank installed a multimodal, bike-friendly crossing of Lancaster that improves bicycle connectivity in the area and between Haverford and Bryn Mawr.
- **Community Activism**
 - Along with the Shipley School and the Lower Merion Conservancy, Haverford continues to lead the [Lower Merion Climate Action Coalition](#) of schools and colleges to promote climate action within their institutions and across the Township.

Looking ahead to 2021-22:

- *Begin implementation of the Utility & Carbon Master Plan to meet carbon neutrality no later than 2035*
- *Implement organic waste digestion within the Dining Center*
- *Continue building efficiency and lighting upgrades*
- *Explore remediation steps around campus light pollution*
- *CER to conduct a sustainability audit of the Students' Council budget*
- *New water bottle stations in Gest, VCAM, KINSC*

Submitted by:

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